

# AGRC E911 Annual Report (11/10/06)

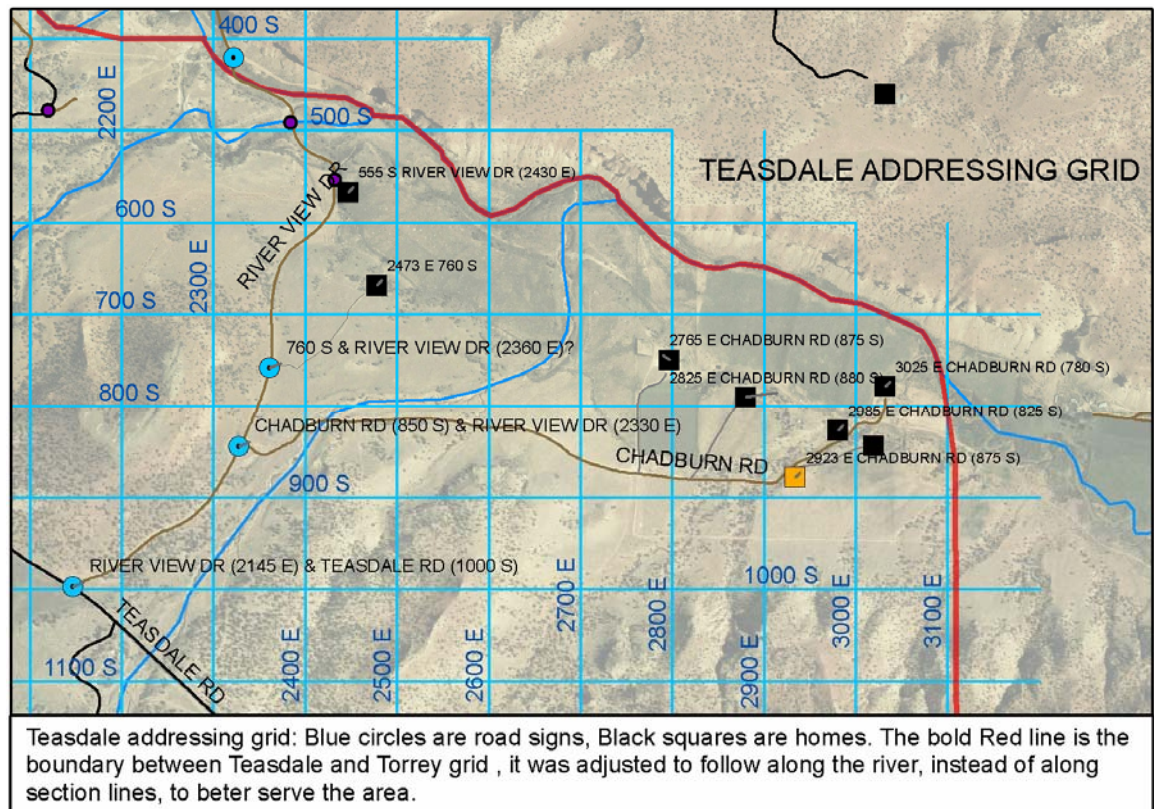
## INTRODUCTION

Utah recently completed the second year of funding geospatial technical support for E911 implementation. The goal has been to cooperatively develop and share the best (most accurate, current, and complete) information about the State's transportation/address infrastructure. It has been agreed formally through statute and in practice, that the State Geographic Information Database (SGID), managed by the Automated Geographic Reference Center (AGRC), is the central clearinghouse for standardized digital transportation data for local, state, federal and tribal agencies in Utah. AGRC, working with local, state, tribal and federal agency partners, is creating an accurate representation of transportation for the approximately 100,000 miles of roads in Utah.

## APPROACH

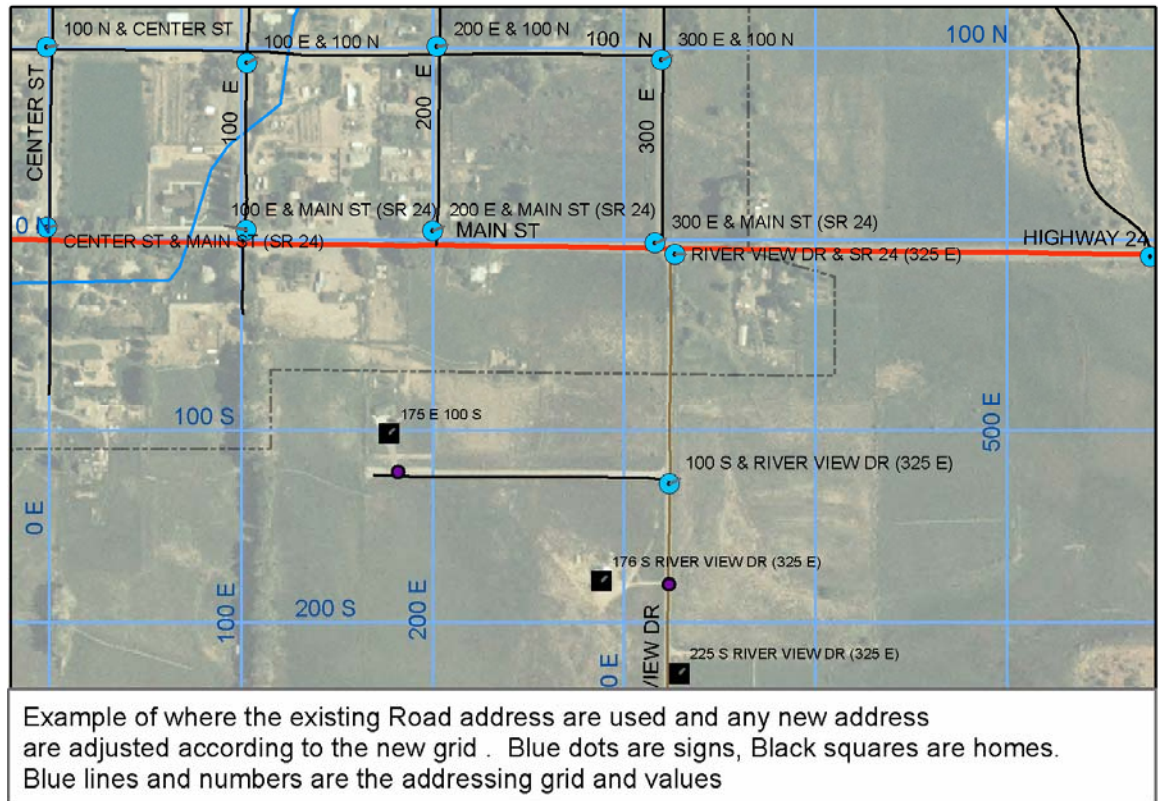
AGRC's approach is multi-faceted and can be categorized into 9 distinct functions: 1 through 5 being the current priorities.

- 1) **County and PSAP support.** AGRC meets with county leaders including commissioners, sheriffs, emergency services, PSAP operators and dispatchers, road department, recorders, assessors, and surveyors and the GIS coordinators. We are documenting what technologies they are using for ALI/ANI and dispatch and what their GIS data or technical support needs are.



Example #1 shows an address grid system in a typical rural area. Multiple grid areas are defined per county to reflect current addressing schemes and other considerations that include place names, roads, phone prefix number areas, zip code boundaries, and local preferences.

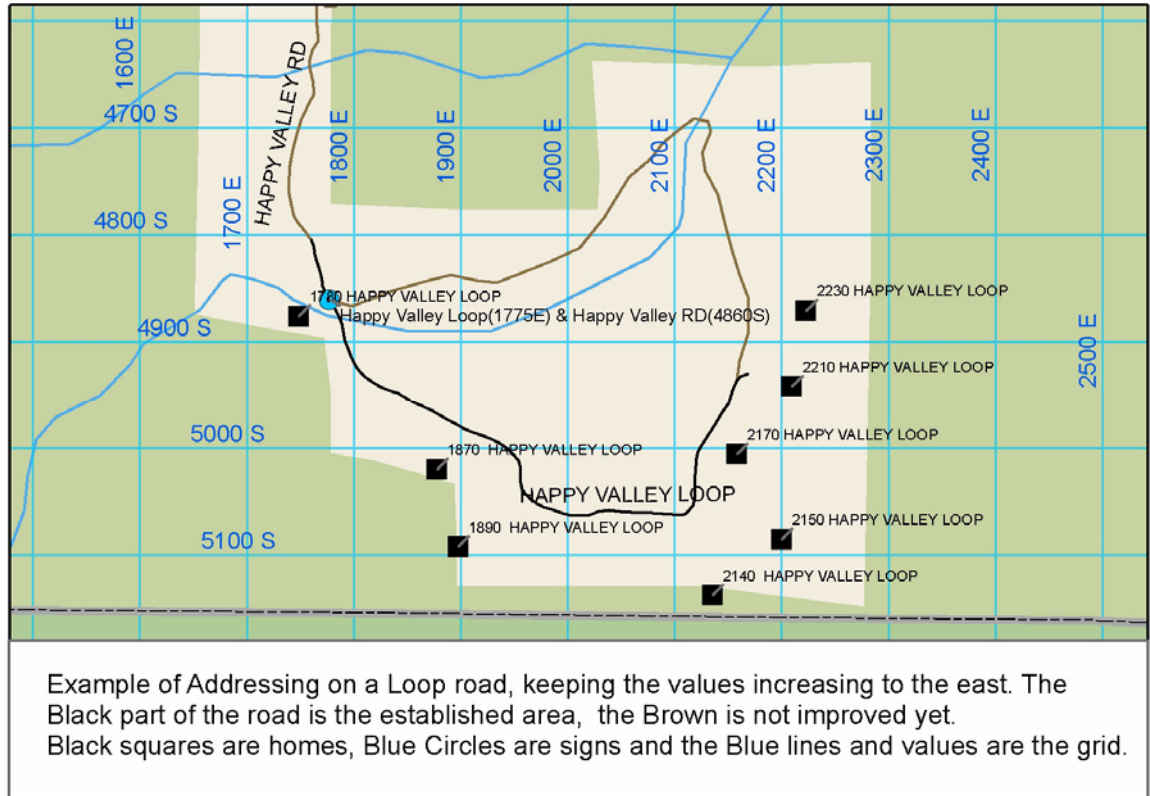
Technical support is provided for centerline creation which includes location and digitizing of roads; developing and implementing road naming conventions, standards, and rules; determining and populating other road name aliases along with the creation of the MSAG; addressing and grid generation; identifying a center of origin and block size to suit the county; linear referencing systems; helping to determine signage locations, number of signs, and sign text.



Example #2 illustrates the address grid system, and sign location and text.

The Master Street Address Guide (MSAG) can be generated out of the geospatial database for formatting and migration into the ALI/ANI software used by the PSAP. (Partial example from Big Water grid illustrated below)

E,AMERICAN WAY,,950,1299,BIG WATER,9999  
 E,ARLINGTON DR,100 N,1,99,BIG WATER,9999  
 E,BALD EAGLE DR,,1020,1119,BIG WATER,9999  
 E,BRANDYWINE DR,200 N,1,99,BIG WATER,9999  
 E,CANNONBALL DR,,800,929,BIG WATER,9999  
 E,CONCORD BRIDGE DR,300 N,1,99,BIG WATER,9999  
 E,DRY POWDER DR,400 N,1,99,BIG WATER,9999  
 E,HAWKINS DR,500 N,1,99,BIG WATER,9999  
 E,INDEPENDENCE DR,,1300,1389,BIG WATER,9999  
 E,JUSTICE DR,,1258,1399,BIG WATER,9999  
 E,LEXINGTON DR,600 N,1,99,BIG WATER,9999  
 E,NONAME BIG WATER 2 RD,,1050,1149,BIG WATER,9999  
 E,NONAME BIG WATER 3 RD,,1100,1199,BIG WATER,9999  
 E,OLD GLORY DR,,860,1129,BIG WATER,9999



Example #3 shows how a loop road in a typical rural area is addressed to take advantage of the newly developed grid system.

- 2) **E911 Committee Support.** AGRC also support the E911 Committee by developing products including PSAP status map and cell phone provider coverage areas. AGRC also produces maps showing grant amounts for PSAPs and other products the committee requests.
- 3) **Urban areas data.** Initially, the focus has been to complete and provide quality control for centerlines/addresses in urban areas where most of the population is. This includes examples like Salt Lake County where AGRC integrates data from multiple sources including VECC, Salt Lake City, Sandy City and Salt Lake County to develop a comprehensive standardized data set. It also includes rural counties where AGRC is doing the field work for creation of GPS centerlines and calibration of address from field observation of signs and house numbers. This process often includes AGRC, the county, various cities, Blue Stakes, the Bureau of Census, U. S. Department of Transportation, Utah Department of Transportation, and the Division of Emergency Services.
- 4) **Rural populated areas data.** The next focus is the rural areas of the counties typified by farms, ranches and small subdivisions. These areas typically do not have addressing schemes or, have very sporadic and non-standardized addresses. AGRC is working with each county to develop a rural addressing scheme that makes sense for their geography (see examples above). We also work with neighboring counties to ensure connectivity for both road centerline and descriptive attributes are accurate and logical. AGRC is also engaged in



an activity initiated by the Canyon Country Partnership to compare names of roads crossing county boundaries and solve discrepancies to limit issues for dispatchers.

- 5) **Public lands data.** The Canyon Country Partnership activity identified above is focusing on Class B roads many of which are on public lands. AGRC and CCP have worked with the BLM and Forest Service to solve these naming issues. The Federal Communications Commission (FCC) requires wireless communications providers Automatic Location Identification (ALI) functionality. Acquisition of road centerlines across public lands using GPS technology has been a several year effort. It is near completion, but developing addressing schemes for these roads was not done. Road traveling outside of towns are only partially addressed. Roads traveling across public land have no address ranges but may have names in the GIS database. We are now working with individual counties and the public land management agencies to develop grid systems or linear reference systems for these areas. The Canyon Country Partnership is conducting a pilot project in Emery County to test one option for this endeavor. Similar activities are underway in several other counties.
- 6) **Processes for long term maintenance.** AGRC is working with each county, UDOT and federal agencies to determine best practices for each area to keep the data current. As more accurate data becomes available for a particular road segment or as new road segments are developed, a process must be in place to update the SGID, the PSAP data, and other databases requiring centerline / address information.
- 7) **TIGER modernization.** Data from all counties in Utah passed the Census Bureau's TIGER accuracy requirements this year. The Census Bureau initiated a process to increase the accuracy and currency of their TIGER database. TIGER is the data used for redistricting and many federal programs requiring classification by population or demographic characteristics. Their goal is to have the entire nation's transportation base GPSed by 2006. They intend to use state and local data where it exists. Census will include all road centerline data in TIGER when complete. Since some PSAPs use commercial centerline datasets derived from TIGER, it is in the State's best interest to make sure TIGER is as accurate as possible.
- 8) **Provide access to the data.** The Utah State Legislature established the SGID in 1991 with the intent to serve as a repository and clearinghouse, and provide standards for data acquired in the State. All non-sensitive data in the SGID is publically accessible over the World Wide Web. Utah also coordinates with national activities including Geospatial One Stop (GOS) and the National Map (TNM). The GOS vision of the Federal Geographic Data Committee and the U.S. Office of Management and Budget is to "revolutionize e-government by providing a geographic component". This initiative will contribute to Utah's transportation data activities by developing and implementing data standards, maintain an inventory of data, publish metadata for planned data acquisition and update activities, prototype and deploy web mapping services, establish a federal portal to national data resources. The National Map, initiated by the US Geological Survey, will develop a national database for framework layers including transportation. This database will be the primary source for all federal agency geographic information needs. All transportation / address

data developed in support of E911 will be available through these state and national data portals.

- 9) **Provide base data for Homeland Security:** Geographic Information Systems and data are essential to Utah's Homeland Security initiative, serving as the framework for vulnerability assessment, preparedness planning, and response and recovery. The GIS Advisory Committee, working with the Department of Public Safety and the Office of the State's Chief Information Officer, is taking the lead on insuring the most accurate, current, and detailed data is available. This group will lead in identification of transportation vulnerabilities to intentional disruption. Utah has a number of areas where terrain limits the options for ground travel. Principal routes through the state abound with "choke points" vulnerable to anything from an avalanche or landslide, to the deliberate destruction of an overpass, bridge, or a toxic material spill. The use of GIS and current transportation data will help model alternate routes and other function necessary for E911 response.

### **CURRENT STATUS**

In this section, we will list overall activities, priorities and summarize the activities in each county.

#### **Beaver County**

Beaver County and AGRC personnel GPS'd the road centerlines throughout the county. In 2005, AGRC integrated the county's GPS road centerlines with the DLG/CFF road centerlines (derived from USGS 1:24K topo maps) to create one comprehensive dataset. The address ranges, street names, prefix/suffix directions, and zip codes have been populated on the road centerlines within each town. Kevin Whicker (County GIS) maintains the county's road centerline database. The dataset is available in the SGID (State Geographic Information Database). The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 (Circular Error of a 95% Confidence Level) of 3.87 meters. Within the GIS database, there are approximately 4781 total road miles and 58 miles of addressed roads. Roads traveling outside of towns are only partially addressed. Roads traveling across public land have no address ranges but may have names in the GIS database.

#### **Box Elder County**

In 2002, AGRC collected the GPS road centerlines and populated their address ranges, street names, prefix/suffix directions, and zip codes. On December 21, 2005, AGRC met with Scott Wolford (Box Elder County DPS) to determine the county's needs for E911 and addressing. In December 2005 and January 2006, AGRC collected additional GPS centerlines and field checked the address ranges, names, and prefix/suffix directions on roads that previously had no such information. AGRC integrated all of the existing GPS data and DLG/CFF data into one comprehensive dataset. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 4.6 meters. Within the GIS database, there are approximately 6341 total road miles and 602 miles of addressed roads.

### **Cache**

Cache County personnel digitized and GPS'd the road centerlines throughout the county. In 2002, AGRC collected the GPS road centerlines within each town and populated their address ranges, street names, prefix/suffix directions, and zip codes have been populated on streets within each town. The AGRC made field observations to determine such attributes for street centerlines traveling on the outskirts of each town. In December 2005 and January 2006, AGRC collected additional GPS centerlines and field checked the address ranges, names, and prefix/suffix directions on roads that previously had no such information. AGRC integrated all existing GPS data, data collected by the county, data digitized by the Logan City GIS Department, and the DLG/CFF data into one comprehensive dataset. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.86 meters. Within the GIS database, there are approximately 3010 total road miles and 1285 miles of addressed roads.

### **Carbon**

Ben Clement (County GIS/roads) maintains the county's road centerline database. Carbon County personnel GPS'd and digitized the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. Starting with Emery County, Carbon County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.48 meters. Within the GIS database, there are approximately 2671 total road miles and 76 miles of addressed roads.

### **Daggett**

In August 2006, AGRC completed Daggett County's addressing project. Within the GIS database, the road centerlines in each town and subdivision now have address ranges, street names, prefix/suffix directions, and zip codes. AGRC generated a MSAG (Master Street Address Guide) for the PSAP's ANI/ALI software. Lesay Asay (Assessor/County GIS) will maintain the GIS database and MSAG for currency. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.91 meters. Within the GIS database, there are approximately 805 total road miles and 108 miles of addressed roads.

### **Davis**

Dave Vance (County GIS) maintains a road centerline database for the entire county. The cities of Kaysville, Centerville, Layton, and Farmington each maintain their own GIS road centerline database. AGRC integrated the county's data with these cities' data to create one comprehensive database. On November 1 2006, the road centerline data for the cities of Kaysville, Centerville, Layton, and Farmington was implemented into AGRC's SDE (Spatial Database Engine). These cities are now able to edit and maintain their own centerline data in one central location, thereby eliminating data redundancy and assuring the most current version is available in the SGID at all times. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with

a CE95 of 6.14 meters. Within the GIS database, there are approximately 1733 total road miles and 1081 miles of addressed roads.

### **Duchesne**

Duchesne County personnel digitized and GPS'd the road centerlines throughout the county. In February 2006, AGRC integrated the county's data with GPS data collected by UDOT and the DLG/CFF data to create one comprehensive dataset. AGRC populated the address ranges, street names, prefix/suffix directions, and zip codes on the road centerlines within each town. The attributes for street centerlines on the outskirts of towns were populated by Stoney Monks (County GIS). The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.93 meters. Within the GIS database, there are approximately 3782 total road miles and 643 miles of addressed roads.

On November 9, 2006, AGRC met with Barry Jensen (Executive Director of Uintah & Ouray Indian Reservation) to discuss the Reservation's E911 and addressing needs. AGRC will coordinate with the Reservation in the collection of GPS road centerlines and address calibration.

### **Emery**

Jeff Guymon (County GIS) maintains the county's road centerline database. Emery County personnel GPS'd and digitized the road centerlines throughout the county and populated the address ranges, street names, prefix/suffix directions, and zip codes within each town. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. Emery County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.96 meters. Within the GIS database, there are approximately 5363 total road miles and 1184 miles of addressed roads.

### **Garfield**

Garfield County and AGRC personnel GPS'd the road centerlines throughout the county. In 2002, AGRC collected the GPS road centerlines within each town and populated the address ranges, street names, prefix/suffix directions, and zip codes. In February 2006, AGRC integrated all GPS'd data with the DLG/CFF data to create one comprehensive dataset. On November 2, 2006, AGRC sent Cydne Quitter (County GIS) the road centerline dataset to further improve and maintain. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.09 meters. Within the GIS database, there are approximately 5366 total road miles and 31 miles of addressed roads.

### **Grand**

Dave Vaughn (County GIS/Road Department) maintains the county's road centerline dataset. Grand County personnel GPS'd the road centerlines throughout the county. In 2004, AGRC collected the GPS centerlines in the Moab area. In 2005, AGRC created an address grid for Castle Valley and populated the address ranges, street names, prefix/suffix directions, and zip codes. For streets traveling outside of the towns, such

attributes have been partially populated. AGRC integrated the county's GPS data with the DLG/CFF road centerlines to create one comprehensive dataset. In January and February 2006, AGRC collected additional GPS centerlines and field checked the address ranges, names, and prefix/suffix directions on roads that previously had no such information. Grand County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.78 meters. Within the GIS database, there are approximately 7304 total road miles and 75 miles of addressed roads.

### **Iron**

Iron County and AGRC personnel GPS'd the road centerlines throughout the county. In 2003, AGRC began collecting GPS road centerlines within each town and populated their address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated all of the GPS road centerlines with the DLG/CFF data into one comprehensive dataset. The AGRC made field observations to determine such attributes for street centerlines traveling on the outskirts of the towns. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.89 meters. Jared Wilson (County GIS) will further improve and maintain the dataset for currency. Within the GIS database, there are approximately 5896 total road miles and 941 miles of addressed roads.

### **Juab**

Juab County and AGRC personnel GPS'd the road centerlines throughout the county. In 2005, AGRC collected the GPS road centerlines within each town and populated the address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated all of the GPS road centerlines with the DLG/CFF data into one comprehensive dataset. Glenn Greenhalgh (County GIS) will further improve and maintain the dataset for currency. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.04 meters. Within the GIS database, there are approximately 4705 total road miles and 64 miles of addressed roads.

### **Kane**

Kane County personnel and the AGRC GPS'd the road centerlines throughout the county. In 2003, AGRC collected the GPS road centerlines within each town and populated their address ranges, street names, prefix/suffix directions, and zip codes. In March and April 2006, AGRC collected additional GPS centerlines and field checked the address ranges, names, and prefix/suffix directions on roads that previously had no such information. On September 7, 2006, AGRC met with Dave Owens (E911), Lou Pratt (County GIS/Road Department), VerJean Caruso (Recorder), and Mike Savage/Dennis Johnson of South Central Communications to determine the county's E911 and addressing needs. AGRC is currently calibrating the road centerline addresses in the Big Water and Duck Creek areas. When complete, all road centerlines within each town and subdivision will have address ranges, street names, prefix/suffix directions, and zip codes. The AGRC will also create the MSAG based on the new address calibration. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER



Modernization program with a CE95 of 4.45 meters. Within the GIS database, there are approximately 2947 total road miles and 120 miles of addressed roads.

### **Millard**

Millard County personnel GPS'd the road centerlines throughout the county. In 2004, AGRC collected the GPS road centerlines within each town and populated their address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated all of the GPS road centerlines with the DLG/CFF data into one comprehensive dataset. Adam Britt (County GIS) will further improve and maintain the dataset for currency. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 7.53 meters. Within the GIS database, there are approximately 10017 total road miles and 264 miles of addressed roads.

### **Morgan**

In 2003/2004, AGRC collected the GPS centerline for all accessible roads in the county. AGRC integrated the GPS road centerlines with the DLG/CFF data into one comprehensive dataset. The address ranges, street names, prefix/suffix directions, and zip codes have been populated on the road centerlines within each town. The AGRC made field observations to determine such attributes for street centerlines traveling on the outskirts of the towns. In April 2006, AGRC created a GIS data layer of Morgan County's address grid. The address grid and road centerlines database was sent to Dave Manning (County GIS) for further improvement and maintenance. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 7.32 meters. Within the GIS database, there are approximately 1312 total road miles and 64 miles of addressed roads.

### **Piute**

Piute County personnel and the AGRC GPS'd the road centerlines throughout the county. In 2003, AGRC collected the GPS centerlines within each town and populated their address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated all of the GPS data with the DLG/CFF data into one comprehensive dataset. On October 2, 2006, AGRC met with Commissioner Kay Blackwell and Dave Whittaker (County GIS) at Piute County's PSAP (located in Sevier County) to determine the most efficient means for improving and maintaining Piute County's road centerline database. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.8 meters. Within the GIS database, there are approximately 1230 total road miles and 15 miles of addressed roads.

### **Rich**

Rich County personnel and the AGRC GPS'd the road centerlines throughout the county. In 2002 & 2005, AGRC collected the GPS road centerlines within each town and subdivision and populated their address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated all of the GPS data with the DLG/CFF data into one comprehensive dataset. Debbie Ames (County GIS/Recorder) will further improve and maintain the dataset for currency. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with

a CE95 of 5.58 meters. Within the GIS database, there are approximately 2484 total road miles and 92 miles of addressed roads.

### **Salt Lake**

In March 2006, AGRC integrated the most current version of the unincorporated road centerlines from Salt Lake County with that of VECC's (Valley Emergency Communications Center) to create one comprehensive database. In June 2006, the comprehensive database was implemented into AGRC's SDE for Salt Lake County to further improve and maintain. Salt Lake County is now able to edit and maintain their centerline data in one central location, thereby eliminating data redundancy and assuring the most current version is available in the SGID at all times. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 3.51 meters. Within the GIS database, there are approximately 4263 total road miles and 3942 miles of addressed roads.

### **San Juan**

Dave Bronson (County GIS) maintains the county's road centerline database. San Juan County and AGRC personnel GPS'd the road centerlines throughout the county. The address ranges, street names, prefix/suffix directions, and zip codes have been populated extensively on streets within each town. For streets traveling outside of the towns, such attributes are partially populated. San Juan County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 7.38 meters. Within the GIS database, there are approximately 7967 total road miles and 55 miles of addressed roads.

In November and December 2005, AGRC coordinated with the Utah Navajo Trust in the collection of GPS point locations of each structure on the Navajo Reservation. The GIS database that was created is pertinent to the development of the Navajo Nation's E911 system.

### **Sanpete**

Sanpete County personnel and the AGRC GPS'd the road centerlines throughout the county. In 2003 & 2004, AGRC collected the GPS road centerlines within each town and populated their address ranges, street names, prefix/suffix directions, and zip codes. AGRC also GPS'd the road centerlines of several subdivisions. AGRC integrated all of the GPS road centerlines with the DLG/CFF data into one comprehensive dataset. AGRC made field observations to determine such attributes for street centerlines traveling on the outskirts of each town. In February, May, and August 2006, AGRC collected additional GPS centerlines and field checked the address ranges, names, and prefix/suffix directions on roads that previously had no such information. Wayne Larsen (County GIS) will further improve and maintain the county's road centerline database. Sanpete County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available in the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.77 meters. Within the GIS database, there are approximately 3793 total road miles and 382 miles of addressed roads.

### **Sevier**

Sevier County personnel and the AGRC GPS'd the road centerlines throughout the county. In 2004, AGRC collected the GPS road centerlines within each town. AGRC integrated all of the GPS road centerlines with the DLG/CFF data into one comprehensive dataset. The address ranges, street names, prefix/suffix directions, and zip codes have been populated on the road centerlines within each town. On October 2, 2006, AGRC met with Cynthia Nielsen (County GIS), Nathan Curtis (Sheriff), Jeff Nelson (E911/PSAP), Ted Taylor (Wayne County Road Dept.), Piute County Commissioner Kay Blackwell, and Dave Whittaker (Piute County GIS) to discuss the best approach for improving and maintaining the GIS road centerline database for the PSAP. Cynthia Nielsen will further improve and maintain the dataset for currency. Sevier County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.48 meters. Within the GIS database, there are approximately 4090 total road miles and 84 miles of addressed roads.

### **Summit**

Jeff Ward (County GIS) maintains the county's road centerline database. Summit County personnel GPS'd and digitized the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 4.63 meters. Within the GIS database, there are approximately 3362 total road miles and 644 miles of addressed roads.

### **Tooele**

Ed Hom (County GIS) maintains the county's road centerline dataset. Tooele County personnel GPS'd the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's GPS data with the DLG/CFF road centerlines to create one comprehensive dataset. In May 2006, based on county plat maps, AGRC populated the address ranges, street names, prefix/suffix directions in the Stansbury Park area. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 4.51 meters. Within the GIS database, there are approximately 7968 total road miles and 280 miles of addressed roads.

### **Uintah**

Jordan Merrell (County GIS) maintains the county's road centerline database. Uintah County personnel GPS'd the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's GPS data with the DLG/CFF road centerlines to create one comprehensive dataset. Uintah County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 3.07.

meters. Within the GIS database, there are approximately 7253 total road miles and 572 miles of addressed roads.

On November 9, 2006, AGRC met with Barry Jensen (Executive Director of Uintah & Ouray Indian Reservation) to discuss the Reservation's E911 and addressing needs. AGRC will coordinate with the Reservation in the collection of GPS road centerlines and address calibration.

### **Utah**

Patrick Waro (County GIS) maintains the county's road centerline database. Utah County personnel GPS'd and digitized the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. Utah County is currently coordinating with neighboring counties to develop a common road name for roads that cross county boundaries. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.02 meters. Within the GIS database, there are approximately 3512 total road miles and 2470 miles of addressed roads.

The US Census Bureau sent preliminary TIGER data to AGRC in August 2006. The data was verified by Utah County and AGRC. AGRC is currently working with the Census on a maintenance strategy.

### **Wasatch**

Ivan Spencer (County GIS) maintains the county's road centerline database. Wasatch County personnel GPS'd and digitized the road centerlines throughout the county and populated the towns and subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.51 meters. Within the GIS database, there are approximately 2339 total road miles and 462 miles of addressed roads.

### **Washington**

Paul Pfaehler (County GIS) maintains the county's road centerline database. Washington County personnel GPS'd and digitized the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. In February and March 2006, AGRC collected GPS road centerlines in the towns of Hilldale and Apple Valley and populated the address ranges, street names, prefix/suffix directions, and zip codes. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 6.31 meters. Within the GIS database, there are approximately 3933 total road miles and 815 miles of addressed roads.

**Wayne**

In 2002, AGRC collected the GPS road centerlines within each town and populated the address ranges, street names, prefix/suffix directions, and zip codes. Within the GIS database, AGRC has completed the address calibration for the Cainville, Notom, Grover, and Teadale areas. The MSAG for Cainville and Notom was completed and submitted to Wayne County's PSAP in July 2006. AGRC is currently calibrating the addresses in the Loa and Fremont areas. When complete, all of the road centerlines within each town and subdivision will have address ranges, street names, prefix/suffix directions, and zip codes. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.08 meters. Within the GIS database, there are approximately 2249 total road miles and 115 miles of addressed roads.

**Weber**

Jim Quarles (County GIS) maintains the county's road centerline database. Weber County personnel GPS'd and digitized the road centerlines throughout the county and populated the urban areas/subdivisions with address ranges, street names, prefix/suffix directions, and zip codes. AGRC integrated the county's data with the DLG/CFF road centerlines to create one comprehensive dataset. The dataset is available on the SGID. The dataset was submitted to the US Census Bureau and passed the TIGER Modernization program with a CE95 of 5.8 meters. Within the GIS database, there are approximately 2003 total road miles and 1298 miles of addressed roads.